ABSTRACT OF THE DISCLOSURE

One or more rolling or rotating elements such as rollers or bearings reduce friction in an artificial disc replacement (ADR). In the preferred embodiment, the rolling or rotating elements are situated between the ADR and the vertebrae or endplate resurfacing components. The reduced friction decreases the shear stress on the vertebral endplates which, in turn, may decrease pain from the endplates. Alternatively, when used with resurfacing components, the reduced shear will prolong the life of the ADR. Multidirectional wheels allow the ADR to move in all directions to accommodate spinal motion. Roller embodiments allow flexion and extension of the spine with movement of the ADR. Conversely, the vertebrae slide over the dome shaped rollers during lateral bending. Spinal movement occurs as the vertebrae move over the device. The mobile therefore device "self-centers." In all embodiments, the body of the device may flex to dampen axial loads.